

RELATIVE HUMIDITY.

The percentage of mean relative humidity for the month ranges as follows: New England, 66 to 80. Middle Atlantic States, 61 to 86. South Atlantic States, 62 to 80. Eastern Gulf States, 68 to 77. Western Gulf States, 70 to 76. Ohio valley and Tennessee, 63 to 79. Lower Lake region, 67 to 70. Upper Lake region, 66 to 76. Upper Mississippi valley, 58 to 65. Lower Missouri valley, 62 to 64. Valley of the Red River of the North, 70 to 77. Rio Grande valley, 63 to 71. Texas, 61 to 71. Western Plateau, 30 to 45. California, 37 to 71. Oregon, 54 to 82. *High stations* report the following percentages not corrected for altitude: Mt. Washington, 80.7; Pike's Peak, 67.3; Denver, 55.9; Cheyenne, 45.0; Virginia City, 48.7; Santa Fe, 48.0.

WINDS.

The arrows on chart No. II indicate the prevailing direction of the wind at the several stations during the month of October. The prevailing direction was *north to east* in the South Atlantic and Gulf States, in the southern portion of the area of mean high barometer for the month, and *south to west* in the Lake region, Ohio valley, Northwest and interior of Texas, the Middle States and New England. *Northerly* winds prevailed on the Pacific coast as far south as Sacramento, and *southeast* to *southwest* winds in the southern portion of California. At stations in the Rocky Mountain region the prevailing direction was generally from the higher to lower altitudes. Pike's Peak, prevailing direction, northwest; highest velocity, 72 miles, west on 13th. Mount Washington, prevailing direction, northwest; highest velocity, 84 miles, northwest, on the 24th and 31st.

Total Movements of the Air.—The following are the *largest* total movements in the various districts: Pike's Peak, 13,984 miles; Mount Washington, 13,392, incomplete on account of frost-work; Cape Lookout, 12,809; Delaware Breakwater, 11,762; Cape May, 11,803; Chincoteague, 10,985; Kittyhawk, 10,765; Wood's Holl, 10,669; Cape Hatteras, 10,497; Block Island, 10,341; Sandy Hook, 10,299; Sandusky, 10,294; Thatcher's Island, 10,084; Portsmouth, 9,907; Cape Henry, 9,625; Milwaukee, 9,466; North Platte, 9,379; Barnegat, 9,125; Indianola, 9,071. The *smallest* are: La Mesilla, 700 miles; Roseburg, 1,402; Silver City, 2,008; Visalia, 2,937; Augusta, 2,060; Shreveport, 2,113; Uvalde, 2,146; Lynchburg, 2,181; Los Angeles, 2,423; San Antonio, 2,627; Nashville, 2,669; Eagle Pass, 2,818; Olympia, 2,842; Boise City, 2,864; Portland, Or., 2,975; El Paso, 3,128.

Local Storms.—No storms under this head of decided severity were reported during the month except in connection with the passage of low area No. VI, during the 15th, 16th and 17th, which are herewith appended from the reports of various stations and other sources. Morrison, Ill., 16th, violent storm, hundreds of trees prostrated and considerable damage to fences and out-buildings. Riley, Ill., 16th, great damage to trees, fences, corn-fields and a "wholesale destruction of wind-mills;" heaviest storm ever experienced here; estimated velocity of wind 70 miles per hour. Rockford, Ill., 16th, severe gale from the southwest, causing considerable damage. Elmira, Ill., 16th, violent southwest gale nearly all day. Springfield, Ill., 16th, considerable damage to trees, fences and out-buildings. Chicago, 16th, violent southwest gale with sleet from 5.15 to 9.30 p. m., buildings blown down and much damage to shipping; 17th, wind continued high all day. Independence, Iowa, 16th, snow accompanied by a violent westerly gale from 1 to 11 p. m. Guttenburg, Iowa, 15th, severe thunder-storm, creeks in vicinity rose 11 feet above low-water mark; 16th, hurricane from west, accompanied by sleet. Logan, Iowa, 16th, violent westerly gale, worst storm for twenty years. Mt. Vernon, Iowa, violent westerly gale all day. Nora Springs, Iowa, 16th, lowest barometer ever recorded, storm of great severity, all railroad communication westward suspended. Muscatine, Iowa, 16th, very heavy west gale. Cresco, Iowa, 16th, heavy westerly storm, lowest barometer for the year. Vail, Iowa, 16th, storm of unusual severity; snow-drifts from three to five feet deep. Mitchellville, Iowa, 15th, about 4 p. m. a tornado was noticed in the west coming rapidly in direction of town, accompanied by a deep, heavy rumbling sound. The cloud, funnel-shaped and twisting with great rapidity, was accompanied by a heavy westerly gale, and sudden darkness overshadowed everything as it approached the western edge of the village, where it lifted from the earth and passed harmlessly to the northeast, when it again seemed to descend. Dubuque, Iowa, 16th, violent southwest wind, considerable damage to trees, fences and out-buildings. Keokuk, Iowa, 15th, southwest 48 miles, considerable damage to property; 16th, west 40 miles. Davenport, Iowa, 16th, great damage to fences, trees and buildings, and navigation suspended. Topeka, Kan., 15th, southwest 54 miles, much damage to property. Dodge City, Kan., 14th and 15th, north 56 miles. Grand Rapids, Mich., 16th, 17th, violent southwest gale. Escanaba, 16th, much damage to shipping and other property. Port Huron, 16th, severe wind-storm lasting thirty-six hours, much damage to shipping. Grand Haven, 16th, southwest 48 miles, worst day ever seen at this station. Detroit, 17th, heavy southwest wind nearly all day. Genoa, Neb., 15th, violent wind-storm from the north, severest for many years. DeSoto, Neb., 16th, heavy northwest gale. North Platte, 16th, violent gale from northwest, 54 miles per hour. Wooster, Ohio, 17th, violent southwest wind nearly all day. Flemington, W. Va., 16th to 18th, very violent westerly winds. Ashland, Wis., 17th, heavy northeast gale, much damage to docks, warehouses and shipping. Bloomfield, Wis., 16th, violent southwest gale, much damage to fences and buildings. Milwaukee, 16th, southwest 60 miles, much dam-